Exploring methods for predicting multiple pressures on ecosystem recovery: A case study on marine eutrophication and fisheries - DTU Orbit (08/11/2017)

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Efforts to attain good environmental status in the marine realm require decisions which cannot be done without knowledge of effects of different management measures. Given the wide diversity of marine ecosystems, multitude of pressures affecting it and the still poor understanding on linkages between those, there are likely no models available to give all the required answers. Hence, several separate approaches can be used in parallel to give support for management measures. We tested three completely different methods - a spatial impact index, a food web model and a Bayesian expert method. We found that a large uncertainty existed regarding the ecosystem response to the management scenarios, and that the three different modelling approaches complemented each other. The models indicated that in order to reach an improved overall state of the ecosystem nutrient reductions are the more effective of the two management variables explored, and that cumulative effects of the management of nutrient inputs and fishing mortality are likely to exist.

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